ABSTRACT

The invention relates to a method for the controlled application of a stator-current target value (I_{Snom}) and a torque target value (M_{nom}) for a polyphase machine (4) that is supplied by an electronic power converter. According to the invention: current components (I_{Sdnom}, I_{Sqnom}) in a co-ordinate system (d, q) with a fixed rotor flux or rotating magnetic pole are calculated in accordance with a torque target value and in asynchronous machines in accordance with a rotor-flux target value (Ψ_{Rnom}), a calculated rotor-flux actual value (Ψ_R) or a rotating magnetic-pole flux; a stator-circuit frequency (ω_S) is determined; a terminal-flux target value (Ψ_{Knom}) is calculated in accordance with the values (I_{Snom}, I_{Sqnom}, Ψ_R, ω_S) by means of the machine parameters (L, R_S), said terminal-flux target value being subsequently projected onto a flux-course curve, selected from stored, off-line optimised flux-course curves. This permits the state of the stator current (I_S) to be regulated in relation to the rotor flux (Ψ_R) or rotating magnetic-pole flux by means of momentary values, facilitating a stationary and dynamic precise control of motor currents (I_1, I_2, I_3) and thus the torques (M) of a polyphase machine (4).